

#### REMARKS

The claims have been amended to more clearly define the invention as disclosed in the written description. In particular, claim 1 has been amended for clarity.

The Examiner has rejected claims 10-13, 15 and 16 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,404,781 to Kawamae et al. in view of U.S. Patent 5,838,874 to Ng et al. The Examiner has further rejected claims 14 and 17 under 35 U.S.C. 103(a) as being unpatentable over Kawamae et al. in view of Ng et al., and further in view of U.S. Patent 6,490,355 to Epstein. Furthermore, the Examiner has rejected claims 1-6 and 9 under 35 U.S.C. 103(a) as being unpatentable over Kawamae et al. in view of Ng et al., and further in view of U.S. Patent 5,960,081 to Vynne et al. Finally, the Examiner has rejected claims 7 and 8 under 35 U.S.C. 103(a) as being unpatentable over Kawamae et al, in view of Ng et al. and Vynne et al., and further in view of Epstein.

The Kawamae et al. patent discloses a data transmission method for embedding data, data transmitting and reproducing apparatuses and information recording medium therefor, in which additional information is embedded by repeatedly adding the same information into the original data. In particular, as indicated at col. 1, lines 25-28, Kawamae et al. states "The present invention relates to a data transmission method for transmitting and receiving data, such as video and/or audio data in which additional information data (i.e., data hiding or water mark, etc.) are embedded or concealed...."

The Ng et al. patent discloses an audiovisual encoding system with a reduced number of audio encoders, in which a portion of an image of a video signal may be edited while maintaining the same number of bits for the replaced edited region.

The subject invention relates to a method of decoding a digital video signal, and includes, as claimed in, for example, claim 10, "receiving a main bitstream representing, on display, an image of a video signal", "receiving an auxiliary bitstream representing replacement video information corresponding to, on display, an image area of said image", "replacing a sub-series of bits of said main bitstream representing said image area by said replacement video information to obtain a modified bitstream, wherein said modified bitstream defines said sub-series by a substantially same number of bits as a sub-series of bits representing said image area in said main bitstream" and "decoding said modified bitstream".

Applicants first would like to point out that while Kwamae et al. discloses receiving a video signal and an auxiliary bitstream, there is no disclosure that this auxiliary bitstream is in any way related to the video signal. Further, there is no disclosure in Kwamae et al. that the auxiliary bitstream represents "replacement video information corresponding to, on display, an image area of said image". In addition, while Kwamae et al. discloses embedding the auxiliary bitstream into the video signal, there is no disclosure or suggestion that this auxiliary bitstream, representing replacement video information corresponding to, on

display, an image area of said image, replaces a sub-series of bits of said main bitstream representing said image area.

In particular, nowhere in Kwamae et al. is there any disclosure of replacing an image area in the video signal with a corresponding image area as represented by the auxiliary bitstream.

It is noted that the Examiner believes that Kwamae et al. clearly discloses this limitation at col. 7, lines 37-57.

However, this is not so. In particular, the noted section of Kwamae et al. states:

"FIG. 3 shows an embodiment of a process for embedding the additional information into the video data. A piece of a picture (i.e., the video data) can be replaced with a set of data, and in order to perform the embedding process to the data, first of all, they are divided into the plurality of pixel blocks of a square shape in the number  $8 \times 8 = 64$ , for example. Here, each pixel of them is formed with the data of a predetermined number of bits, for instance, if it is formed with the data of 8 bits, it is for a resolution power of 256 steps. And, such the data of the number of sixty-four (64) gathering together construct each of the pixel blocks.

"Here, in case that a certain pixel block is coincident with the point where the additional information data is to be embedded, a process is applied to the pixel block depending on the values, i.e., 1 or 0 of respective bits of the additional information data. For example, when one of the bits of the additional information data which is to be embedded into that point is "1", then the values of the data of the 64 pixels are converted or altered in such a manner that the total value of the 64 pixel data comes to be a multiple of 256:..."

It should be clear by reading the above section that Kwamae et al. is describing modifying a block of pixels in order to embed a bit of the auxiliary data. There is no disclosure or suggestion of "replacing a sub-series of bits of said main

bitstream representing said image area by said replacement video information to obtain a modified bitstream".

The Examiner indicates that Ng et al. is being used "in order to show that transmitting a modified portion of a video signal is well known as seen in Ng fig. 5 and col. 13, lines 33-60."

Applicants would like to note that Ng et al. specifically states "the editing referred to is not the conventional editing of video where scenes are removed, shortened, or moved within a video sequence, the edit state in the present writing refers to changing the quality of a portion of or time sequence of the video by manually setting the quantization of the video." (col. 13, lines 27-32). Hence, it should be apparent that Ng et al. neither discloses nor suggests replacing an image area in the video signal with a corresponding image area as represented by the auxiliary bitstream.

The Epstein patent discloses a method and apparatus for use of a time-dependent watermark for the purpose of copy protection, in which a watermark may be used to for copy protection and to enable recording of the watermarked signal.

With regard to Epstein, Applicants would like to note that it is a desire of watermarks not to affect the displayed image of a video signal. Hence, there is no disclosure in Epstein, or in the combination of Kawamae et al., Ng et al. and Epstein, of examining the video signal corresponding to an image area to detect if the image area (i.e., the displayed image area) identifies copy

protection status, and if so, enables recording of the modified bitstream in which portion of the bitstream corresponding to the image area is replaced by a corresponding bitstream in the replacement video information.

The Vynne et al. patent discloses embedding a digital signature in a video sequence. The Examiner then states that Vynne et al. "teaches the conventional replacement of modified image areas such as logos with the original image or superimposing another logo (see column 1, lines 11-42)."

Applicants firstly submit that Vynne et al. merely mentions that the identifying of television signals by the placement of logos on the displayed image may be defeated "If the images are digital there will be no loss of quality and it will be very easy to remove the channel logo, and even superimpose another logo instead." However, Vynne et al. neither discloses nor suggests how this may be done. Rather, Vynne et al. is concerned with the embedding of a digital signature for identifying the video signal. There is no mention of the digital signature being a modified image area on display.

Applicants therefore submit that Vynne et al. does not supply that which is missing from Kawamae et al. and Ng et al., i.e., "modifying a portion of said original video signal in order to form, on display, a modified image area of said image, thereby creating a modified video signal; transmitting the modified video signal; transmitting an auxiliary signal as a sub-series of bits defining replacement video information for said modified portion of

the original video signal corresponding, on display, to the modified image area of the image as a sub-series of bits, wherein said sub-series of bits is encoded by a substantially same number of bits as said modified portion of the original video signal corresponding, on display, to said modified image area".

In view of the above, Applicants believe that the subject invention, as claimed, is not rendered obvious by the prior art, either individually or collectively, and as such, is patentable thereover.

Applicants believe that this application, containing claims 1-17, is now in condition for allowance and such action is respectfully requested.

Respectfully submitted,

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